CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-25. (canceled)

26. (Currently Amended) A method to implement a graphical user interface on a data processing system having an input device and a display device, the method comprising:

receiving an input which indicates a movement of the input device while a cursor of the graphical user interface is outside a first region on the display device, the input comprising:

a first component which indicates a component of the movement in a first degree of freedom of the input device, and

a second component which indicates a component of the movement in a second degree of freedom of the input device; and

adjusting a first parameter corresponding to a scale of data, under control of a first user interface element of the graphical user interface according to the first component of the input, the first user interface element being located within the first region, wherein the adjusting the first parameter causes a range of the data displayed by another user interface element of the graphical user interface to be adjusted based on a value of the first parameter, wherein adjusting the first parameter comprises remapping the first component of the input to a change in the scale of data.

27. (Previously Presented) A method as in claim 26, wherein the first user interface element is controllable by a movement of the input device when the cursor of the graphical user interface is within the first region.

28. (Previously Presented) A method as in claim 26, further comprising:

adjusting a second parameter under control of a second user interface element of the graphical user interface according to the second component of the input, the second user interface element being located within a second region, the second region being outside the first region.

29. (Previously Presented) A method as in claim 28, wherein the first user interface element is controllable by a movement of the input device when the cursor of the graphical user interface is within the first region; and, wherein the second user interface element is controllable by a movement of the input device when the cursor of the graphical user interface is within the second region.

30. (Previously Presented) A method as in claim 29, wherein the first user interface element comprises a slider and the second user interface element comprises a timeline.

31. (Currently Amended) A ~~machine~~ computer readable medium embodying ~~machine~~ computer readable instructions, said ~~machine~~ computer readable instructions causing a ~~machine~~ computer having an input device and a display device to perform a method to implement a graphical user interface, the method comprising:

receiving an input which indicates a movement of the input device while a cursor of the graphical user interface is outside a first region on the display device, the input comprising:

a first component which indicates a component of the movement in a first degree of freedom of the input device, and

a second component which indicates a component of the movement in a second degree of freedom of the input device; and

adjusting a first parameter corresponding to a scale of data, under control of a first user interface element of the graphical user interface according to the first component

of the input, the first user interface element being located within the first region, wherein the adjusting the first parameter causes a range of the data displayed by another user interface element of the graphical user interface to be adjusted based on a value of the first parameter, wherein adjusting the first parameter comprises remapping the first component of the input to a change in the scale of data.

32. (Previously Presented) A medium as in claim 31, wherein the first user interface element is controllable by a movement of the input device when the cursor of the graphical user interface is within the first region.

33. (Previously Presented) A medium as in claim 31, wherein the method further comprises:

adjusting a second parameter under control of a second user interface element of the graphical user interface according to the second component of the input, the second user interface element being located within a second region, the second region being outside the first region.

34. (Previously Presented) A medium as in claim 33, wherein the first user interface element is controllable by a movement of the input device when the cursor of the graphical user interface is within the first region; and, wherein the second user interface element is controllable by a movement of the input device when the cursor of the graphical user interface is within the second region.

35. (Previously Presented) A medium as in claim 34, wherein the first user interface element comprises a slider and the second user interface element comprises a timeline.

36. (Currently Amended) A data processing system to implement a graphical user interface, the data processing having an input device and a display device, the data processing system comprising:

means for receiving an input which indicates a movement of the input device while a cursor of the graphical user interface is outside a first region on the display device, the input comprising:

a first component which indicates a component of the movement in a first degree of freedom of the input device, and

a second component which indicates a component of the movement in a second degree of freedom of the input device; and

means for adjusting a first parameter corresponding to a scale of data, under control of a first user interface element of the graphical user interface according to the first component of the input, the first user interface element being located within the first region, wherein the adjusting the first parameter causes a range of the data displayed by another user interface element of the graphical user interface to be adjusted based on a value of the first parameter, wherein adjusting the first parameter comprises remapping the first component of the input to a change in the scale of data.

37. (Previously Presented) A data processing system as in claim 36, wherein the first user interface element is controllable by a movement of the input device when the cursor of the graphical user interface is within the first region.

38. (Previously Presented) A data processing system as in claim 36, further comprising:

means for adjusting a second parameter under control of a second user interface element of the graphical user interface according to the second component of the input, the

second user interface element being located within a second region, the second region being outside the first region.

39. (Previously Presented) A data processing system as in claim 38, wherein the first user interface element is controllable by a movement of the input device when the cursor of the graphical user interface is within the first region; and, wherein the second user interface element is controllable by a movement of the input device when the cursor of the graphical user interface is within the second region.

40. (Previously Presented) A data processing system as in claim 39, wherein the first user interface element comprises a slider and the second user interface element comprises a timeline.

41. (Currently Amended) A method for accessing a broad data field having fine resolution comprising:

selecting a scale to control a range for accessing data within the data field, the scale being displayed by a first interface element of a graphical user interface on a display device;

moving the range to encompass different portions of the data field, a position of the range relative to the data field being displayed by a second interface element of the graphical user interface on the display device; and

changing simultaneously the scale while moving the range over different portions of the data field,

wherein the scale is controlled by moving a cursor positioning device along a first axis and selecting the scale includes remapping movement of the cursor positioning device along the first axis to a change in the scale of data, and

wherein the position of the range is controlled by moving the cursor positioning device along a second axis and moving the range includes remapping movement of the cursor along the second axis to a change in the range.

42. (Canceled).

43. (Canceled).

44. (Currently Amended) The method of claim [[42]] 41, wherein the position of the range is controlled by moving the cursor positioning device in an axis orthogonal to the first axis.

45. (Previously Presented) The method of claim 44, wherein moving the cursor positioning device in an upward motion increases the scale and moving the cursor positioning device in a downward motion decreases the scale.

46. (Previously Presented) The method of claim 45, wherein moving the cursor positioning device to the right causes the range to be shifted to the right and moving the cursor positioning device to the left causes the range to be shifted to the left.

47. (Previously Presented) The method of claim 46, wherein a particular piece of data can be accessed within the data field having five orders of magnitude.

48. (Previously Presented) The method of claim 47, wherein the range is displayed as a timeline.

49. (Previously Presented) The method of claim 48, wherein the cursor positioning device is also capable of controlling the position of a cursor of the graphical user interface on a display screen.

50. (Currently Amended) The method of claim 49, wherein the scale and the position of the range are capable of being simultaneously controlled by the cursor positioning device after positioning the cursor over an icon and depressing a button and moving the cursor positioning device while the button is depressed.

51. (Previously Presented) The method of claim 50, wherein the cursor positioning device is at least one of a mouse, a track ball, a touch tablet, joystick.

52. (Currently Amended) A method for accessing a particular piece of data within a broad data field having fine resolution comprising:

selectively varying a scale, thereby determining a range, the range spanning a portion of the data field, the scale being displayed by a first interface element of a graphical user interface on a display device;

moving the range relative to the data field, thereby encompassing portions of the data field such that the particular piece of data lies within the range, a position of the range relative to the data field being displayed by a second interface element of the graphical user interface on the display device;

locating a point close to the location of the particular piece of data within the data field using the second control element;

decreasing the scale, thereby increasing the range's resolution, while simultaneously moving the range relative to the data field to keep the point within the range; and

successively repeating said decreasing and said locating, until the particular piece of data is actually accessed.

wherein the scale is controlled in response to remapping an input which indicates movement of an input device along a first axis and the position of the range is controlled in response to remapping an input which indicates a movement of the input device along a second axis.

53. (Currently Amended) The method of claim 52, wherein the input device is a mouse and the scale is controlled by moving [[a]] the mouse along an axis and the position of the range is controlled by moving the mouse along another axis.

54. (Previously Presented) The method of claim 53, wherein the mouse is also capable of controlling the position of a cursor of the graphical user interface on a display screen.

55. (Currently Amended) The method of claim 52, wherein the input device is a trackball and the scale is controlled by moving [[a]] the trackball along an axis and the position of the range is controlled by moving the trackball along another axis.

56. (Currently Amended) An apparatus for accessing a broad data field having fine resolution comprising:

a means for selecting a scale for controlling a range within the data field, the scale being displayed by a first interface element of a graphical user interface on a displayed device;

a means for moving the range to encompass different portions of the data field, a position of the range relative to the data field being displayed by a second interface element of the graphical user interface on the display device; [[and]]

a means for simultaneously selecting the scale while moving the range over different portions of the data field;

a means for remapping movement of an input device along a first axis to a change in the scale; and

a means for remapping movement of the input device along a second axis to a change in the range.

57. (Canceled)

58. (Currently Amended) The apparatus of claim [[57]] 56, wherein the input device is a mouse and wherein the scale is controlled by moving the mouse along an axis and the position of the range is controlled by moving the mouse along another axis.

59. (Previously Presented) The apparatus of claim 58, wherein the range is displayed as a timeline.

60. (Currently Amended) A method for accessing a data set containing a plurality of items comprising:

selecting a scale of access to the data set according to input from an input device with relation to a first axis of a first degree of freedom of the input device, the scale being displayed by a first interface element of a graphical user interface on a display; and

selecting a position of access to the data set at the scale according to input from the input device with relation to a second axis of a second degree of freedom of the input device while the first degree of freedom of the input device controls said selecting the scale in the first graphical user interface element, the position being displayed by a second interface element of the graphical user interface on the display device.

wherein selecting a scale includes remapping the input from the input device with relation to the first axis to the scale of access, and

wherein selecting a position includes remapping the input from the input device with relation to the second axis to the position of access.

61. (Previously Presented) The method of claim 60, wherein the input device is at least one of a mouse, a track ball, a touch tablet, a joystick.

62. (Canceled)

63. (Currently Amended) A method for accessing a particular piece of data within a broad data field having fine resolution comprising:

selecting a scale wherein the particular piece of data lies within a range which encompasses a continuous portion of the data set, the scale displaying a magnification level of the data field on a display device, the scale being controlled by a first degree of freedom of an input device in a first interface element of a graphical user interface, wherein selecting the scale includes remapping input from the input device indicating movement along the first degree of freedom to a change in the scale;

decreasing the scale such that the magnification level is increased;

changing a span of the data field covered by the range, according to the scale selected;

moving the data field such that the particular piece of data falls within the range, said moving controlled by a second degree of freedom of the input device in a second ~~control~~ interface element of the graphical user interface while the first degree of freedom of the input device controls the first interface element, wherein moving the data field includes remapping input from the input device indicating movement along the second degree of freedom to a change in the range; and

successively repeating said decreasing the scale and said moving the data field, until the particular piece of data is actually accessed.

64. (Currently Amended)A method to implement a graphical user interface on a data processing system having an input device and a display device, the method comprising:

receiving an input from the input device, the input comprising:

a first component which indicates a component of the input according to a first degree of freedom of the input device, and

a second component which indicates a component of the input according to a second degree of freedom of the input device; and

performing simultaneously the following:

adjusting continuously a first parameter displayed by a first user interface element of the graphical user interface on the display device according to the first component, the first user interface element being located in a first region in the graphical user interface; and

adjusting continuously a second parameter displayed by a second user interface element of the graphical user interface on the display device according to the second component, the second user interface element being located in a second region in the graphical user interface,

wherein adjusting the first parameter comprises remapping the first component of the input to a change in the first parameter, and

wherein adjusting the second parameter comprises remapping the second component of the input to a change in the second parameter.

65. (Previously Presented) A method as in claim 64, wherein the first user interface element is controllable by the input device when a cursor of the graphical user interface is in the

first region; and, the second user interface element is controllable by the input device when the cursor of the graphical user interface is in the second region.

66. (Previously Presented) A method as in claim 65, wherein the first and second regions are not overlapping with each other.

67. (Previously Presented) A method as in claim 66, wherein the cursor is not displayed when the first parameter is adjusted according to the first component and the second parameter is adjusted according to the second component.

68. (Previously Presented) A method as in claim 64, wherein the first and second parameters are independent from each other.

69. (Previously Presented) A method as in claim 64, further comprising:
determining a dominant one of the first component and the second component;
wherein only one of the first and second parameters is adjusted according to the dominant one of the first component and the second component.

70. (Currently Amended)A ~~machine~~ computer readable medium embodying ~~machine~~ computer readable instructions, said ~~machine~~ computer readable instructions causing a ~~machine~~ computer having an input device and a display device to perform a method to implement a graphical user interface, the method comprising:
receiving an input from the input device, the input comprising:
a first component which indicates a component of the input according to a first degree of freedom of the input device, and
a second component which indicates a component of the input according to a second degree of freedom of the input device; and

performing simultaneously the following:

adjusting continuously a first parameter displayed by a first user interface element of the graphical user interface on the display device according to the first component, the first user interface element being located in a first region in the graphical user interface; and

adjusting continuously a second parameter displayed by a second user interface element of the graphical user interface on the display device according to the second component, the second user interface element being located in a second region in the graphical user interface,

wherein adjusting the first parameter comprises remapping the first component of the input to a change in the first parameter, and

wherein adjusting the second parameter comprises remapping the second component of the input to a change in the second parameter.

71. (Previously Presented) A medium as in claim 70, wherein the first user interface element is controllable by the input device when a cursor of the graphical user interface is in the first region; and, the second user interface element is controllable by the input device when the cursor of the graphical user interface is in the second region.

72. (Previously Presented) A medium as in claim 71, wherein the first and second regions are not overlapping with each other.

73. (Previously Presented) A medium as in claim 72, wherein the cursor is not displayed when the first parameter is adjusted according to the first component and the second parameter is adjusted according to the second component.

74. (Previously Presented) A medium as in claim 70, wherein the first and second parameters are independent from each other.

75. (Previously Presented) A medium as in claim 70, wherein the method further comprises:
determining a dominant one of the first component and the second component;
wherein only one of the first and second parameters is adjusted according to the dominant one of the first component and the second component.

76. (Currently Amended) A data processing system to implement a graphical user interface, the data processing system having an input device and a display device, the data processing system comprising:
means for receiving an input from the input device, the input comprising:
a first component which indicates a component of the input according to a first degree of freedom of the input device, and
a second component which indicates a component of the input according to a second degree of freedom of the input device; and
means for performing simultaneously the following:
adjusting continuously a first parameter displayed by a first user interface element of the graphical user interface on the display device according to the first component, the first user interface element being located in a first region in the graphical user interface; and
adjusting continuously a second parameter displayed by a second user interface element of the graphical user interface on the display device according to the second component, the second user interface element being located in a second region in the graphical user interface,
wherein adjusting the first parameter comprises remapping the first component of the input to a change in the first parameter, and

wherein adjusting the second parameter comprises remapping the second component of the input to a change in the second parameter.

77. (Previously Presented) A data processing system as in claim 76, wherein the first user interface element is controllable by the input device when a cursor of the graphical user interface is in the first region; and, the second user interface element is controllable by the input device when the cursor of the graphical user interface is in the second region.

78. (Previously Presented) A data processing system as in claim 77, wherein the first and second regions are not overlapping with each other.

79. (Previously Presented) A data processing system as in claim 78, wherein the cursor is not displayed when the first parameter is adjusted according to the first component and the second parameter is adjusted according to the second component.

80. (Previously Presented) A data processing system as in claim 76, wherein the first and second parameters are independent from each other.

81. (Previously Presented) A data processing system as in claim 76, further comprising:

means for determining a dominant one of the first component and the second component;

wherein only one of the first and second parameters is adjusted according to the dominant one of the first component and the second component.